

# United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.		
10/603,662	06/26/2003	Woong Kwon Kim	041993-5221	4008		
9629	7590 09/22/2004		EXAM	EXAMINER		
MORGAN LEWIS & BOCKIUS LLP			TON, MINH TOAN T			
1111 PENNS	YLVANIA AVENUE N	W				
WASHINGTON, DC 20004		•	ART UNIT	PAPER NUMBER		
	,		2871			

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

				1900
		Application No.	Applicant(s)	
	·	10/603,662	KIM ET AL.	
	Office Action Summary	Examiner	Art Unit	
		Toan Ton	2871	
Period fo	The MAILING DATE of this communication a or Reply	appears on the cover sheet wi	th the correspondence address	S
THE   - External after - If the - If NC - Failu Any (	ORTENED STATUTORY PERIOD FOR REF MAILING DATE OF THIS COMMUNICATION nsions of time may be available under the provisions of 37 CFR SIX (6) MONTHS from the mailing date of this communication. period for reply specified above is less than thirty (30) days, a reperiod for reply is specified above, the maximum statutory perior to reply within the set or extended period for reply will, by started the period by the Office later than three months after the material patent term adjustment. See 37 CFR 1.704(b).	N. 1.136(a). In no event, however, may a re reply within the statutory minimum of thirt od will apply and will expire SIX (6) MON tute, cause the application to become AB	eply be timely filed y (30) days will be considered timely. THS from the mailing date of this commur ANDONED (35 U.S.C. § 133).	nication.
Status				
2a) <u></u>	Responsive to communication(s) filed on This action is FINAL. 2b) \( \bigsim \text{T} \) Since this application is in condition for allow closed in accordance with the practice under	his action is non-final. wance except for formal matt		rits is
Dispositi	ion of Claims			
5)	Claim(s) 1-20 is/are pending in the application 4a) Of the above claim(s) is/are with declaim(s) is/are allowed.  Claim(s) is/are rejected.  Claim(s) is/are objected to.  Claim(s) are subject to restriction and it is on Papers.  The specification is objected to by the Examination The drawing(s) filed on is/are: a) and applicant may not request that any objection to the Replacement drawing sheet(s) including the correct The oath or declaration is objected to by the	Irawn from consideration.  d/or election requirement.  iner.  accepted or b) objected to he drawing(s) be held in abeyan rection is required if the drawing	ce. See 37 CFR 1.85(a). (s) is objected to. See 37 CFR 1.	
Priority (	under 35 U.S.C. § 119			
12) [ a) [	Acknowledgment is made of a claim for forei  All b) Some * c) None of:  1. Certified copies of the priority docume  2. Certified copies of the priority docume  3. Copies of the certified copies of the priority docume  application from the International Bure  See the attached detailed Office action for a least	ents have been received. ents have been received in A riority documents have been eau (PCT Rule 17.2(a)).	pplication No received in this National Stag	je
Attachmen	t(s) e of References Cited (PTO-892)	4) ☐ Interview S	Summary (PTO-413)	
2) Notic 3) Inform	e of Draftsperson's Patent Drawing Review (PTO-948) mation Disclosure Statement(s) (PTO-1449 or PTO/SB/0 r No(s)/Mail Date	Paper No(s	s)/Mail Date nformal Patent Application (PTO-152)	)

Application/Control Number: 10/603,662 Page 2

Art Unit: 2871

### **Drawings**

- The drawings are objected to under 37 CFR 1.83(a) because they fail to show "340" (a 1. storage electrode) as described in the specification (of Figure 5). Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
- 2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: "525" of Figure 5. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR

Art Unit: 2871

1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

# Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States
- (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
- 4. Claims 1-5 and 15-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Kim et al (US 6559904).

Kim discloses a liquid crystal display device comprising (see at least Figures 1-5): a plurality of gate lines and data lines arranged horizontally and vertically, respectively, for defining a plurality of pixel areas; a plurality of switching devices (TFTs) formed at

Application/Control Number: 10/603,662 Page 4

Art Unit: 2871

intersections of the gate lines and the data lines; and a pixel electrode formed in a pixel area connected to the switching device corresponding to the pixel area and partially overlapping the data lines adjacent to the corresponding pixel area, wherein a first parasitic capacitance generated by the pixel electrode overlapping a data line for the corresponding pixel area and a second parasitic capacitance generated the pixel electrode overlapping a data line for an adjacent pixel area are substantially equal to each other (see at least col. 2, lines 27-31).

Kim discloses a part of the data line for the corresponding pixel area protruding into the corresponding pixel area and overlapping by the pixel electrode (see at least Figures 1-5).

Kim discloses a part of the data line for the adjacent pixel are protruding into the corresponding pixel area and overlapping by the pixel electrode (see at least Figures 1-5).

Kim discloses a portion of the pixel electrode overlapping a data line having a taper shape (see at least Figures 1-5).

5. Claims 1-3, 6-9, 15-16 and 18-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Takemura (US 5852488).

Takemura discloses a liquid crystal display device comprising (see at least Figures 4-5): a plurality of gate lines and data lines arranged horizontally and vertically, respectively, for defining a plurality of pixel areas; a plurality of switching devices (TFTs) formed at intersections of the gate lines and the data lines; and a pixel electrode formed in a pixel area connected to the switching device corresponding to the pixel area and partially overlapping the data lines adjacent to the corresponding pixel area, wherein a first parasitic capacitance generated by the pixel electrode overlapping a data line for the corresponding pixel area and a

Application/Control Number: 10/603,662

Art Unit: 2871

second parasitic capacitance generated the pixel electrode overlapping a data line for an adjacent pixel area are substantially equal to each other (see at least col. 7, lines 42-46).

Takemura discloses a part of the data line for the corresponding pixel area protruding into the corresponding pixel area and overlapping by the pixel electrode (see at least Figures 4-5).

Takemura discloses a part of the data line for the adjacent pixel are protruding into the corresponding pixel area and overlapping by the pixel electrode (see at least Figures 4-5).

Takemura discloses the device comprising basic elements of the TFT such as gate, source drain and semiconductor layer, and wherein the pixel electrode is connected to the source/drain electrode through a contact hole of a passivation/insulating layer (see at least Figures 4-5).

Takemura discloses the source/drain electrode protruding into the pixel area and overlapping by the pixel electrode (see at least Figures 4-5).

6. Claims 1-3, 6-10, 15-16 and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamashita (US 5659375)

Yamashita (see Figures 1-4, 8-9) discloses a liquid crystal display device comprising (see Figures 1-4, 8-9): a plurality of gate lines and data lines arranged horizontally and vertically, respectively, for defining a plurality of pixel areas; a plurality of switching devices (TFTs) formed at intersections of the gate lines and the data lines; and a pixel electrode formed in a pixel area connected to the switching device corresponding to the pixel area and partially overlapping the data lines adjacent to the corresponding pixel area, wherein a first parasitic capacitance generated by the pixel electrode overlapping a data line for the corresponding pixel area and a

second parasitic capacitance generated the pixel electrode overlapping a data line for an adjacent pixel area are substantially equal to each other (see at least col. 4, lines 15-19).

Yamashita discloses a part of the data line for the corresponding pixel area protruding into the corresponding pixel area and overlapping by the pixel electrode (see Figures 1-4, 8-9).

Yamashita discloses a part of the data line for the adjacent pixel are protruding into the corresponding pixel area and overlapping by the pixel electrode (see Figures 1-4, 8-9).

Yamashita discloses the device comprising basic elements of the TFT such as gate, source drain and semiconductor layer, and wherein the pixel electrode is connected to the source/drain electrode through a contact hole of a passivation/insulating layer (see at least Figures 1-4, 8-9).

Yamashita discloses the source/drain electrode protruding into the pixel area and overlapping by the pixel electrode (see Figures 1-4, 8-9).

Yamashita discloses a storage capacitor electrode formed below the data line and extended along the data line (see Figures 1-4, 8-9).

#### Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 2871

## **Contact Information**

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan Ton whose telephone number is (571) 272-2303.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

September 15, 2004

TOANTON
PRIMARY EXAMINER